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ON SCRIVENER'S PALSY,

AND

ITS TREATMENT

BY

GALVANISATION OF THE CERVICAL
SYMPATHETIC NERVE.

BY

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ON SCRIVENER'S PALSY.

THE pathology of this peculiar and most troublesome affection is still enveloped in a considerable degree of uncertainty, although numerous theories have been put forward concerning it. Some observers believe it to be due to a simple spasm of the motor nerves of the hand, arising from over-exertion, while others consider it a reflex neurosis, originating, not from the nerves of the skin, but from the sentient nerves of the muscles used in writing. Others again look upon it as a symptom of softening of the brain, or of granular disintegration of the vesicular neurine of the upper portion of the spinal cord.

Post-mortem examinations of uncomplicated cases of scrivener's palsy are as yet wanting, which is easily accounted for by the affection having no tendency to shorten life. In some cases where the nervous system has, after death, been examined with the scalpel and microscope, considerable degenerative changes have been discovered in the thalamus opticus and corpus striatum; but then there had been during life a whole train of symptoms foreign to true scrivener's palsy, and plainly referable to the anatomical changes just mentioned. Indeed, some patients suffering from scrivener's palsy ultimately die of hemiplegia, or other nervous affections; but quite as many of them succumb to kidney or liver disease, or to acute inflammatory disorders and other complaints, none of which bear any peculiar relationship to the affection which we are now considering.

In some diseases the efficacy of a particular mode of treatment, which was perhaps resorted to on purely speculative grounds, has given us valuable hints on the nature of the complaint for the cure of which it was used. But even this source of knowledge has until now been wanting as far as scrivener's palsy is concerned, for as yet no kind of treatment appears to have given uniformly satisfactory results. Rest has been largely prescribed, and is even now most strongly recommended by the best authorities; but in the majority of cases rest appears to be perfectly unavailing for the cure of the disease. Of course, as long as patients do not write, they are a great deal more comfortable than when they write much, or make futile attempts to do so; but how many return to their desk after a holiday of six, twelve, or eighteen months, during which they never touched a pen, only to find, to their grievous disappointment, that the rebellion of the hand against the mind continues just as strong as before, or that, if it did appear suppressed for the first few days, it was a suppression like that of the Cuban insurrection, which a subsequent mail shows to be undaunted, in spite of ministerial announcements and Parliamentary thanksgivings.

It is also quite certain that drugs do absolutely no good in scrivener's palsy. Everything that appeared to have the least chance of influencing the course of the disease has been tried, more especially the so-called nervine tonics, such as nitrate of silver, arsenic, phosphorus, alone or in combination with iron and strychnia, bromide and iodide of potassium, etc., but without any avail. The usual recommendation of the handbooks to improve the general health of the patient is no doubt well meant, but can hardly be said to be useful, as the general health of the scrivener is generally very good; and it seems hard to both physician and patient to give and take drugs which must be, to say the least, superfluous. Mechanical contrivances intended to procure rest to the fingers, and to allow the act of writing more with the arm than with the hand, generally prove useful only for a very short time, sometimes not longer than for a day or two;

and after their use the suffering is generally rather more severe than it was before.

Local applications of liniments, embrocations, and ointments, whatever be their ingredients; hot, tepid, and cold local and general baths; gymnastic exercises; sea, mineral water, and carbonic acid baths, have all been tried and found wanting.

I am inclined to look upon scrivener's palsy as a symptom of fatigue and functional irritability of the co-ordinative centres in the upper portion of the spinal axis, which have by education been trained for the guidance of the mechanical act of writing, and which, on being by the mind called upon to act, put certain sets of muscles into harmonious, although unconscious, play for the performance of that act. Over-exertion of these ganglia must impair their nutrition, just as every other organ in the body has its nutrition impaired by over-exertion. Again, a constitutionally feeble condition of these ganglia may induce scrivener's palsy in persons who have never written much, and need not write unless they like. I have had two Peers under my care, who would unquestionably, and very fairly too, object to be called scriveners, but who, nevertheless, suffered from scrivener's palsy in an exquisite form. In one of them it was difficult to make out a family history of nervous affections, but in the other the following history was obtained:—His father was a fidgety, excitable man, who died early; his only full sister had for years suffered from an intractable form of chorea; his half-sister was subject to fits of depression. The patient himself, previous to the affection coming on, lived habitually highly, eating rich things, taking a full allowance of wine, besides being an active supporter of the turf, which often produced great excitement. Under such circumstances the affection may develop itself without any excesses in writing having taken place.

I cannot agree with Mr. Solly's opinion, that the pathological lesion in these cases is a granular disintegration of the vesicular neurine of the spinal cord. If such severe

anatomical changes really occurred in scrivener's palsy, it would be impossible to comprehend the immediate and extraordinary feeling of relief and improvement which is, in many cases, effected by one or two applications of the continuous galvanic current. From looking at these facts, and also at the permanent recovery which can be obtained by a prolonged galvanic treatment such as will be presently described, I have arrived at the conclusion that there are much slighter changes of nutrition than Mr. Solly would lead us to assume, viz., constriction of the small arteries, dilatation of the veins, and slight serous effusions compressing the nerve-cells, and leading to imperfect nutrition of the same; that is to say, changes which we know to yield, if occurring in other organs, to the catalytic influence of the continuous galvanic current, which produces a proper dilatation of the blood-vessels, and thus allows serous effusions to be absorbed, and the finer processes of nutrition to be fairly carried on.

That the motor nerves and muscles do not suffer in scrivener's palsy is evident to the most superficial examination. The muscles are often in splendid condition, and every simple movement of the arm and hand can be performed with the greatest ease. The patients generally say that there is nothing wrong with the hand itself, and offer to show you great feats of muscular power which they can accomplish with the hand and arm. They grasp your own hand with the power of a vice; they bang the table with force, and express their astonishment at there being so much power, and yet so little ability for that peculiar act which they desire above all things to accomplish, and which is to many of them a matter of life and death, as poverty stares them in the face in the event of their being obliged to throw up their employment.

In certain cases some other complicated acts, for which the skilful co-ordination of a number of muscles is required, appear troublesome. Some years ago I had a patient under my care who was an ardent admirer of the master works of the great classical composers, and whose only enjoyment

after the monotony of a tedious day's work consisted in his evening's play of Handel, Bach, and Mozart. Six months after the first difficulty in writing had appeared, he found great trouble in executing a particular fugue which had been his great delight; and the discovery that his only pleasure in life would probably be taken away from him, by the fingers refusing to obey the mind, made him more wretched than the thought about his position in life, which depended in a great measure on the use of his pen.

It follows from the preceding remarks that we can only hope for a really effective treatment of scrivener's palsy if we employ an agent which may directly influence the condition of those central ganglia which are affected in this disorder; an agent which must at the same time be tonic and sedative in its neuro-therapeutical effects; which must have the power of restoring the circulation of the blood in the suffering parts to its proper condition; which is capable of promoting the absorption of serous effusions, and will thus cause the nutrition of the maimed ganglia to be raised to its normal standard.

Such an agent we possess in the continuous galvanic current, which appears to unite all the necessary therapeutical requisites for the cure of scrivener's palsy. Some German observers, such as Niemeyer and others, have cured patients of this class by a rough and ready application of the current to the nerves and muscles of the hand and fingers. Such isolated successes obtained by a local application of the current do not clash with our theory of the central origin of the affection; for if one fact is well established in electro-therapeutics, it is this, that the continuous current, peripherally applied, has the tendency to travel towards the centres of the nervous system. For how could we, to mention only one circumstance, otherwise explain the sensation of galvanic taste which is so frequently experienced when the nerves of the arm or the leg are galvanised?

Local applications to the hand are vastly inferior to the central application of the current. The seat of the disease

being in the upper portion of the spinal axis, one pole should be applied to the upper vertebræ; while the knowledge that the cervical sympathetic nerve has a powerful influence upon the nutrition of the whole nervous system, induces us to apply the other pole to the ganglion cervicale superius. The direction of the current is by no means without influence upon the result of the application; for experience shows that the positive pole on the vertebræ, and the negative in the stylo-mastoid fossa, is the really curative arrangement, while the reverse flow of the current does little, if any, good. The current should be allowed to act from three to five minutes at a time, and be applied to both sides, if the left hand be also suffering. Twenty or twenty-five cells of Daniell's battery furnish sufficient power for this application. The almost immediate relief from disagreeable sensations in the hand and arm which generally follows such a procedure is pleasant to the patient, and the ultimate cure which results, if the treatment be continued for a sufficient time, a source of gratification to the physician. As generally all other means fail to effect a cure in this most troublesome complaint, I cannot too strongly recommend medical practitioners to resort at once to galvanisation of the cervical sympathetic, when the characteristic symptoms of scrivener's palsy have made their appearance; for the treatment is all the more rapidly successful the earlier it is employed after the commencement of the disease.